

## Natural Increase and Net Migration

**Source:** Demography & Workforce Section, Weldon Cooper Center for Public Service, University of Virginia.

**Definition:** *Natural Increase* refers to the excess of births over deaths in a particular geographic area over a defined time period. *Net Migration* is the excess of persons moving into an area versus those moving out. Generally speaking, either measure can be positive or negative. Positive natural increase means that there are more births than deaths in an area; natural decrease implies more deaths than births. Analogously, net migration may be either positive or negative, depending on whether more people are moving into the area or leaving it.

**Limitations:** The calculation of both natural increase and net migration depends on the availability of accurate beginning and ending population totals. Consequently, both measures are usually calculated for the 10-year period between federal decennial censuses. Natural increase can be measured directly, by tabulating birth and death statistics. Net migration, however, cannot be directly measured, and is calculated as a residual [net migration = (later population minus earlier population) minus natural increase]. Errors in either census count will be reflected as inaccuracies in the net migration estimate.

Birth and death statistics are normally available on a calendar year basis, whereas the federal census is conducted on April 1. In order to calculate natural increase or net migration, the birth and death statistics have to be pro-rated in the census years in order to reflect the April 1 - December 31 time period in the earlier census and the January 1 - April 1 time period in the later census. The pro-ratio of births and deaths can also lead to small inaccuracies in the calculations.

Birth and death statistics for particular jurisdictions may be in error, due to the miss-assignment of place of residence. This problem is particularly acute for some county-city combinations.

### **For More Information:**

More information about the Weldon Cooper Center for Public Service and its operations may be found at: <http://www.coopercenter.org/>

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